

# DESIGN DOCUMENT - SPRINTS

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## GROUP - 29

### Sprint Details

Sprint	Main Features/Deliverables
Sprint 1	Set up a working environment, UI/UX, Login/Sign-Up
Sprint 2	Booking and Reservation, Parking Instructions
Sprint 3	Entry and Exit Management, Notifications (Email/OTP inclusion)
Sprint 4	Accessibility features for disabled people, Slot extension and Payment Integration
Sprint 5	Dashboard for Owners, Security Monitoring

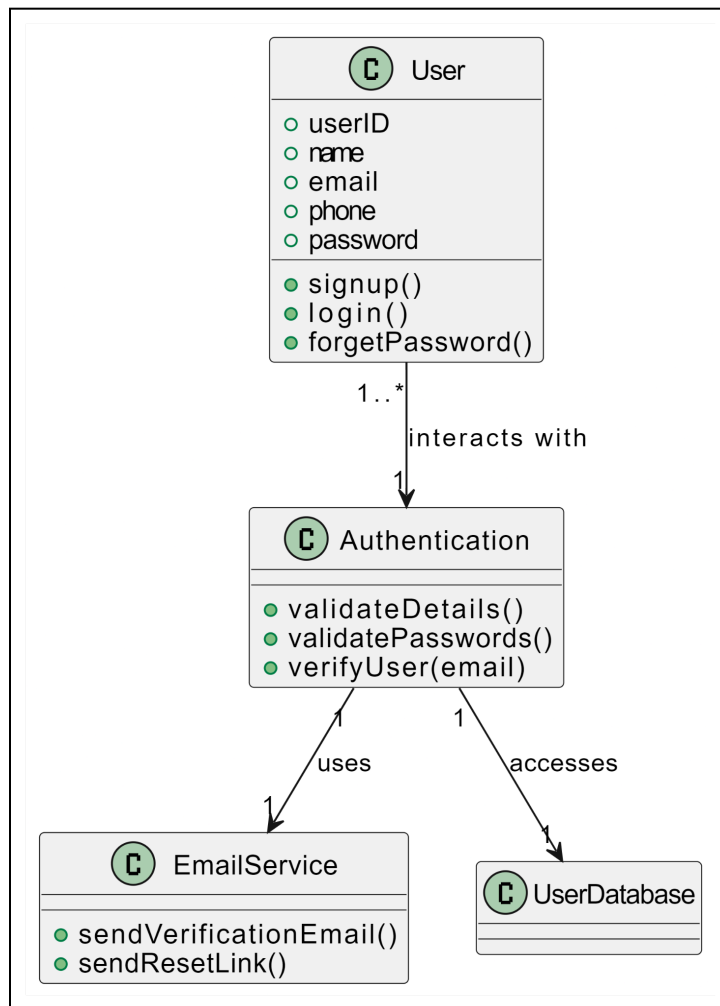
We will now cover the sprint-wise class diagram, sequence diagram and activity diagram for each sprint.

[Link to Drawio for all our diagrams](#)

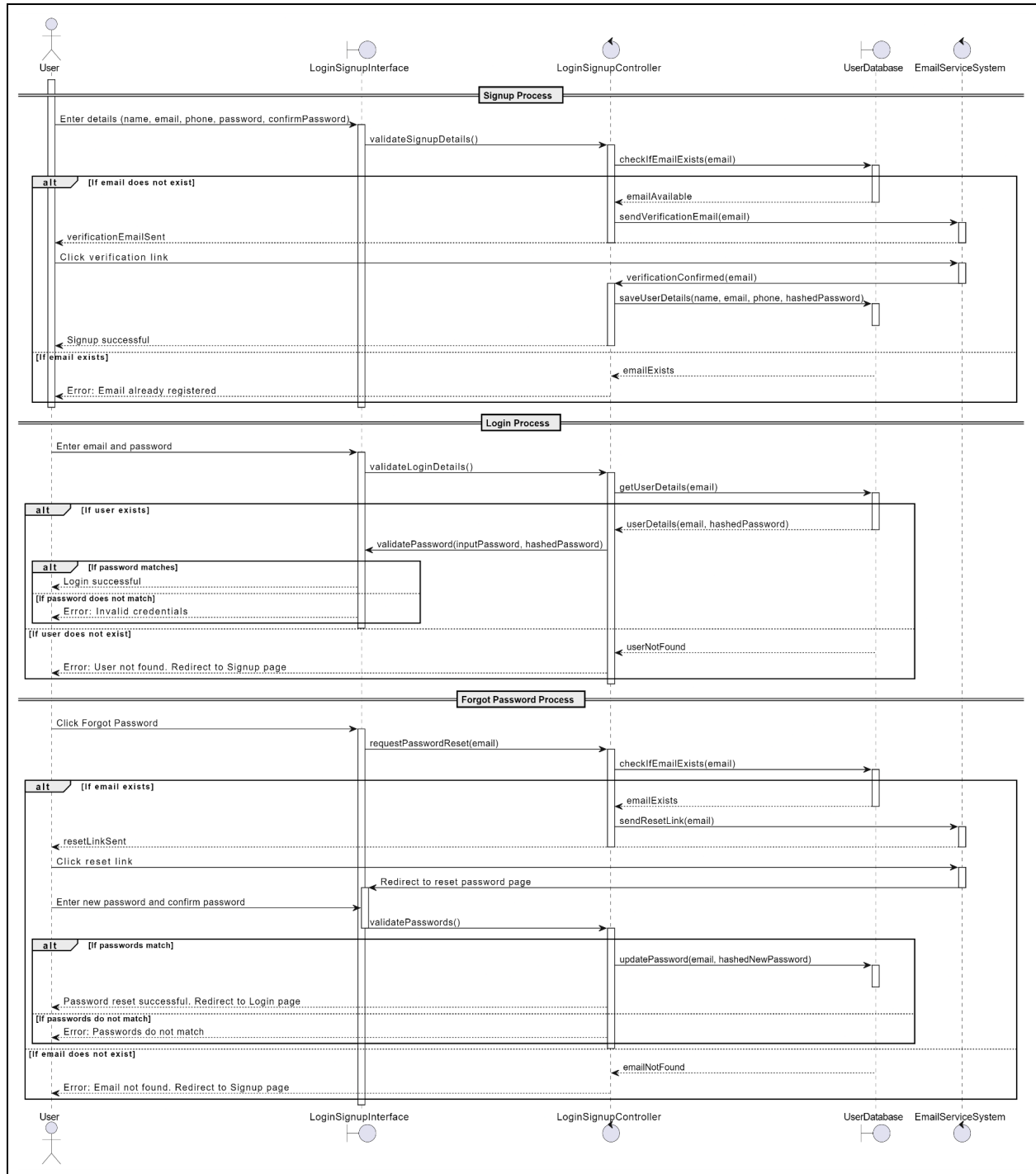
## Sprint 1: Setting up the Working Environment, Login/Sign Up + UI/UX

- **Objectives:**
  - Set up a development environment, repositories, and necessary tools.
  - Implement the login/sign-up functionality with secure authentication (password, OTP, etc.).
  - Design and develop the initial UI/UX, ensuring user-friendly and responsive design.
- **User Stories Covered:**
  - Story 1 : Secure Login and Authentication (Parking Lot Users)
- **Deliverables:**
  - Functional login and sign-up forms.
  - Fully designed UI for login, home screen, and navigation.

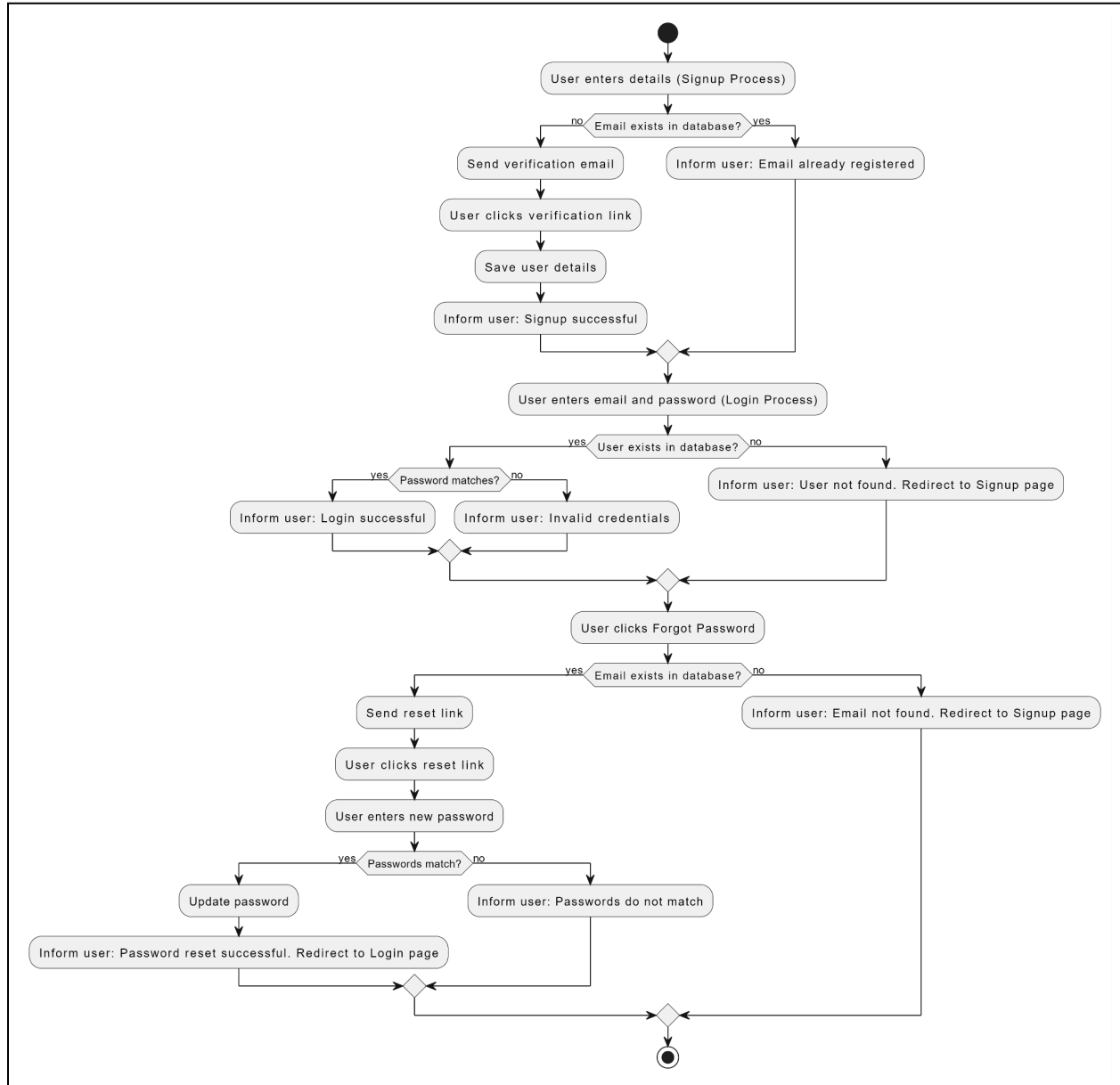
## Sprint 1 - Class Diagram



## Sprint 1 - Sequence Diagram



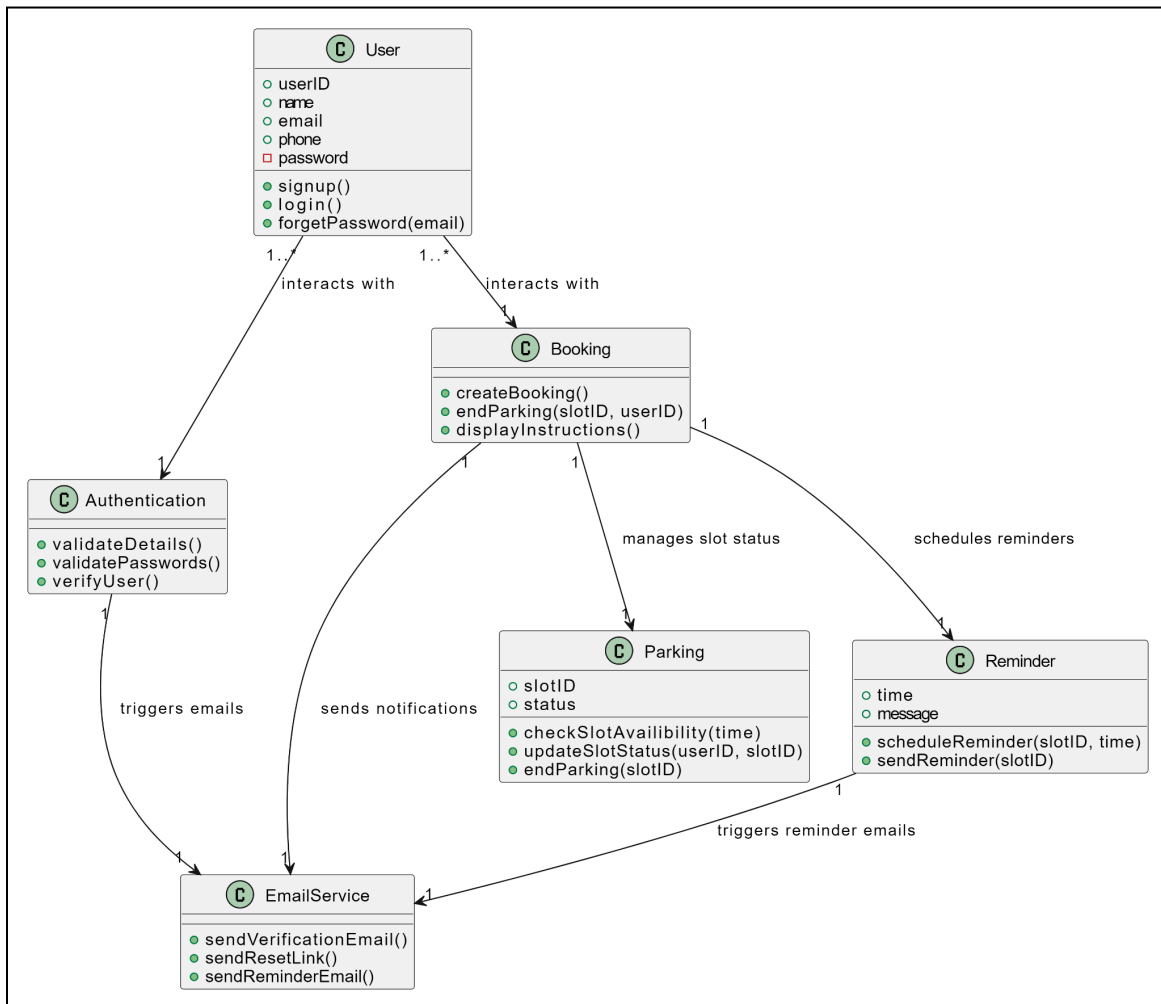
## Sprint 1 - Activity Diagram



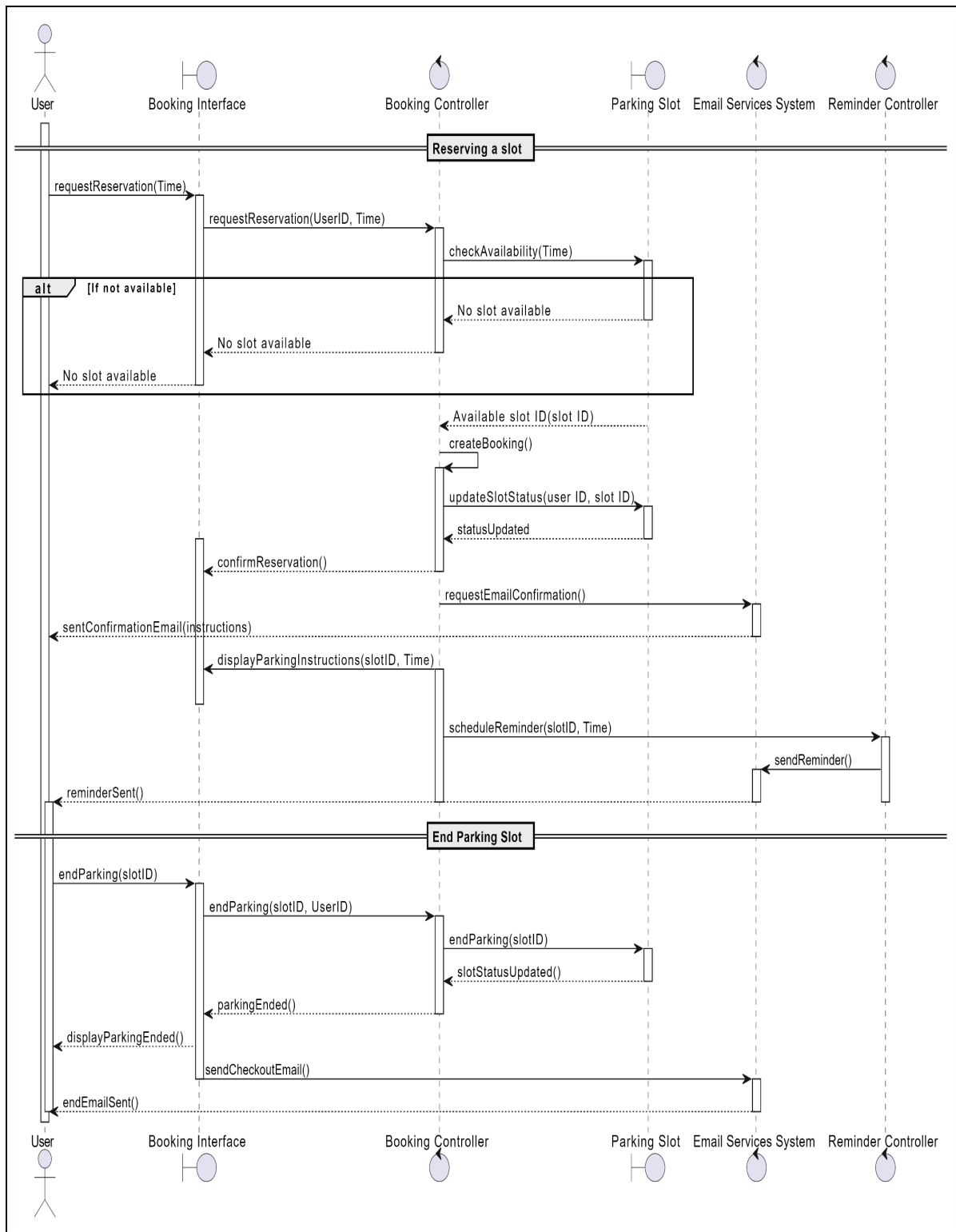
## Sprint 2: Booking and Reservation, Parking Instructions

- **Objectives:**
  - Develop functionality for users to reserve or book parking slots.
  - Provide clear parking instructions to users upon booking.
- **User Stories Covered:**
  - Story 2: Reserve/Book a Slot (Parking Lot Users)
  - Story 3: Parking Slot Entry Reminder (Parking Lot Users)
  - Story 6: End Parking Slot/ Checkout early (Parking Lot Users)
- **Deliverables:**
  - Booking flow for selecting, confirming, and reserving slots.
  - Email/SMS integration for booking confirmation and reminders.

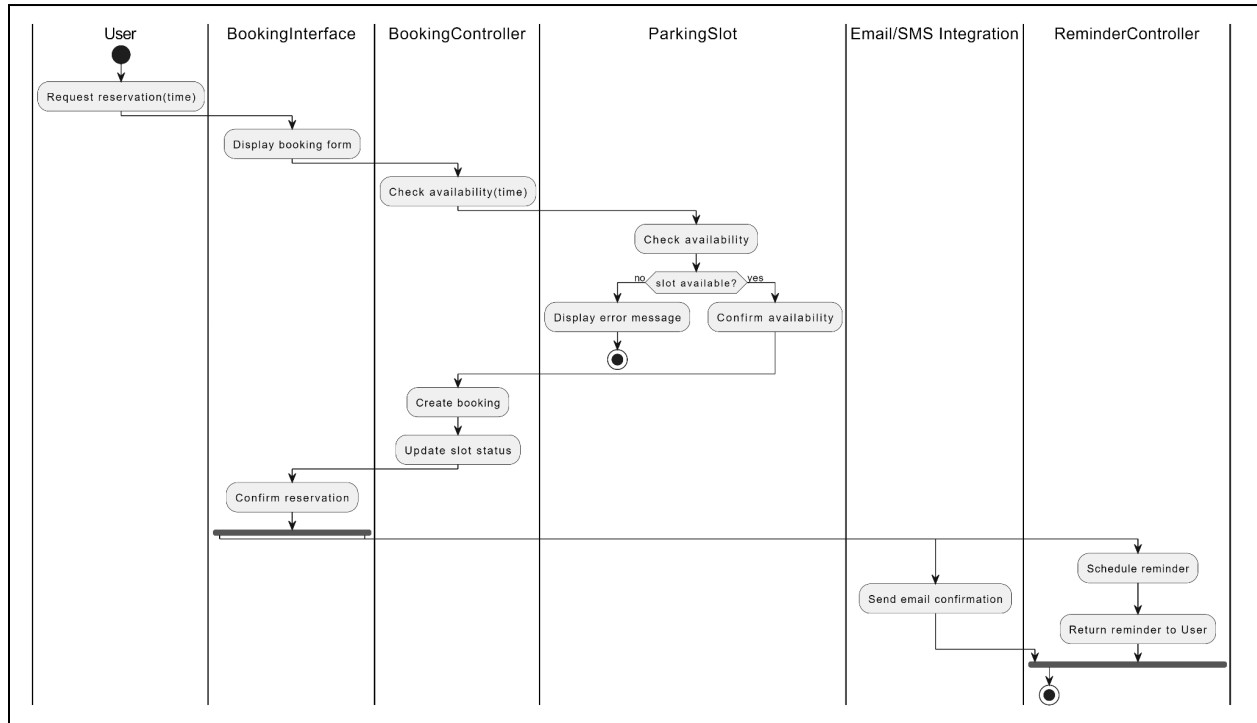
## Sprint 2 - Class Diagram



## Sprint 2 - Sequence Diagram



## Sprint 2 - Activity Diagram

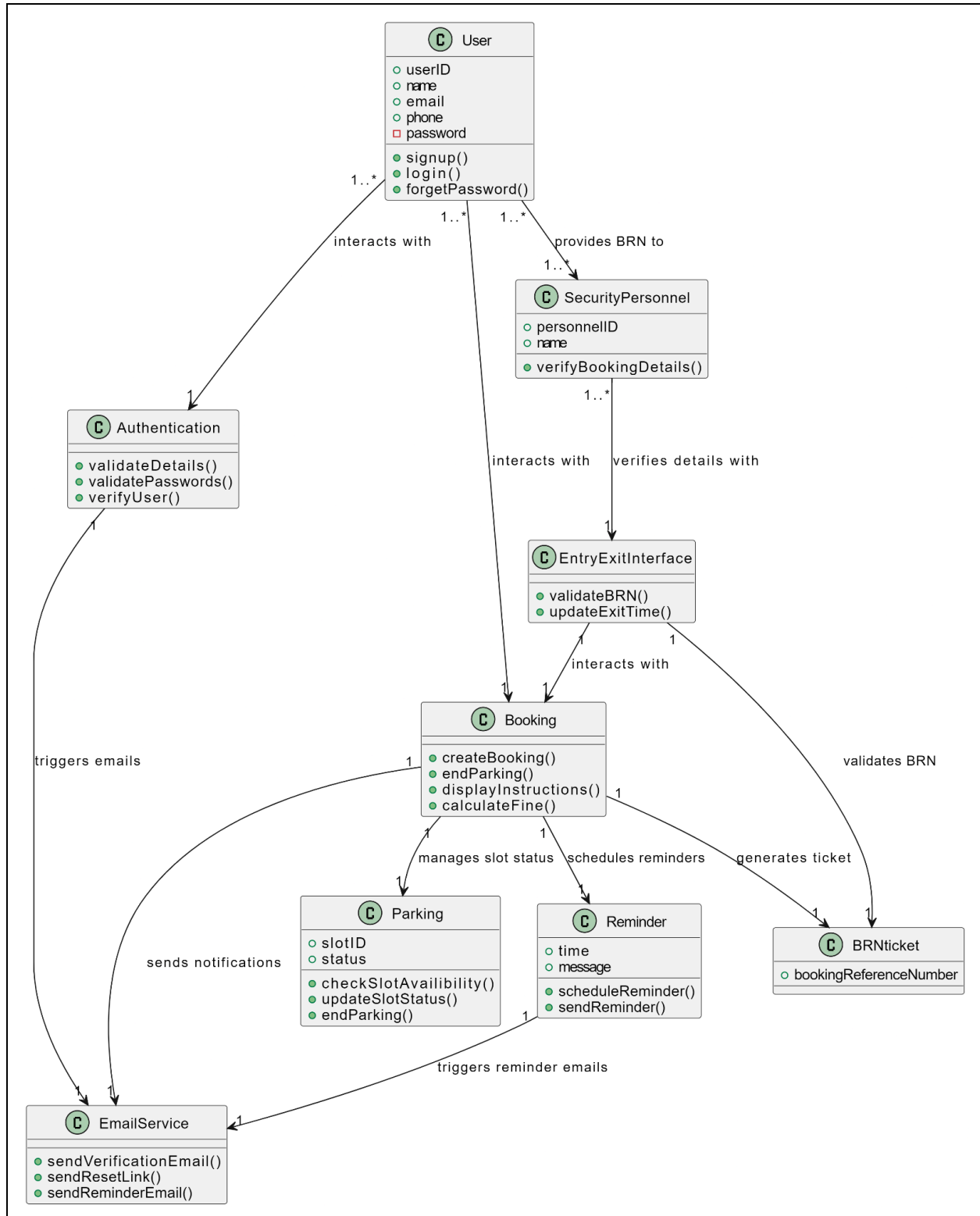


## **Sprint 3: Entry/Exit Management, Notifications, Email, OTP**

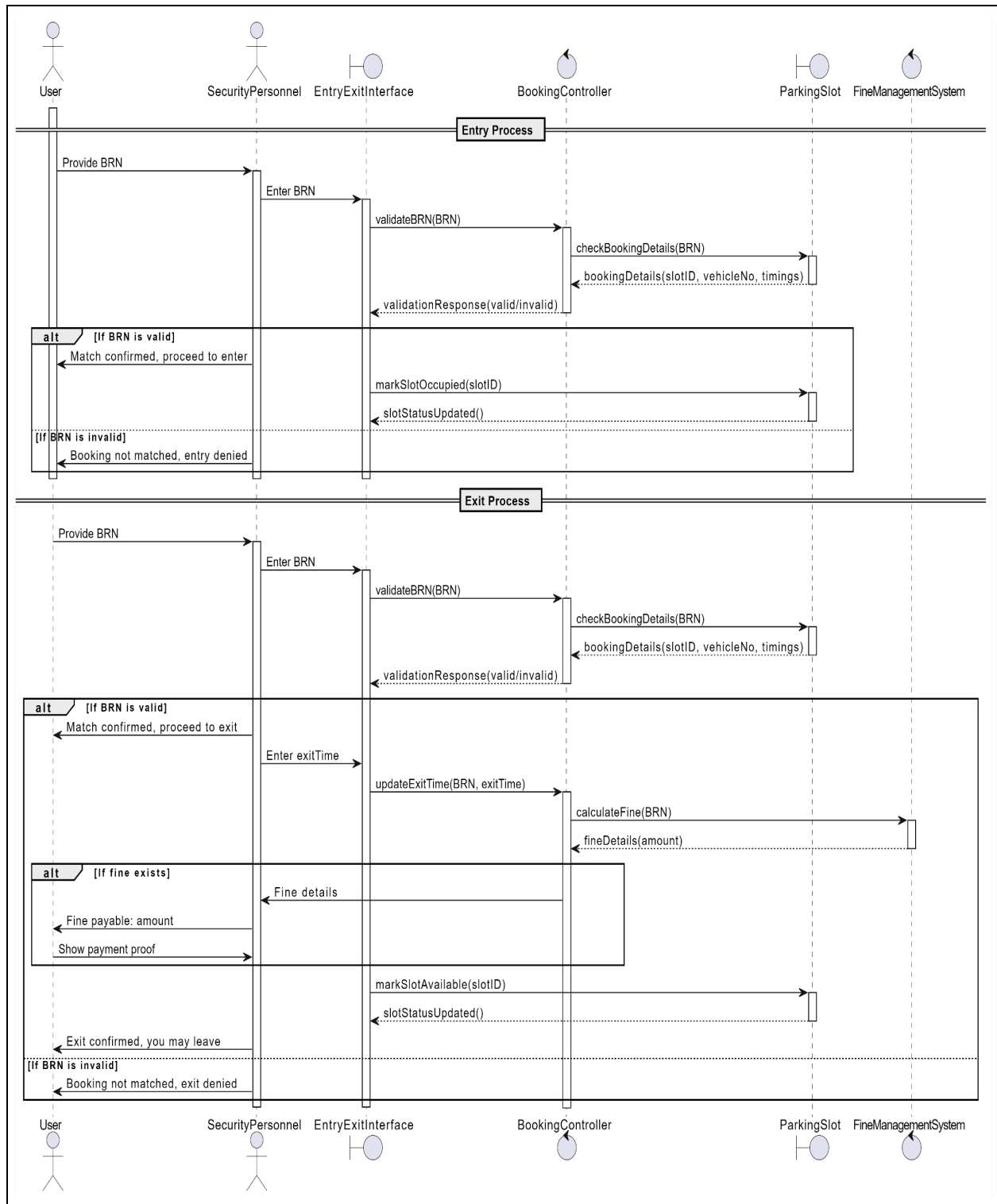
- **Objectives:**
  - Implement entry and exit tracking for parking.
  - Add notification features for user actions (entry/exit, booking reminders).
  - Implement OTP validation for security personnel and user authentication.
- **User Stories:**
  - Story 4: Entrance and Exit (Parking Lot Users)
  - Story 14: Verify User Actions (Security Personnel)
- **Deliverables:**
  - Functional entry/exit tracking.
  - Notification system for reminders and updates.
  - OTP integration for secure validation.



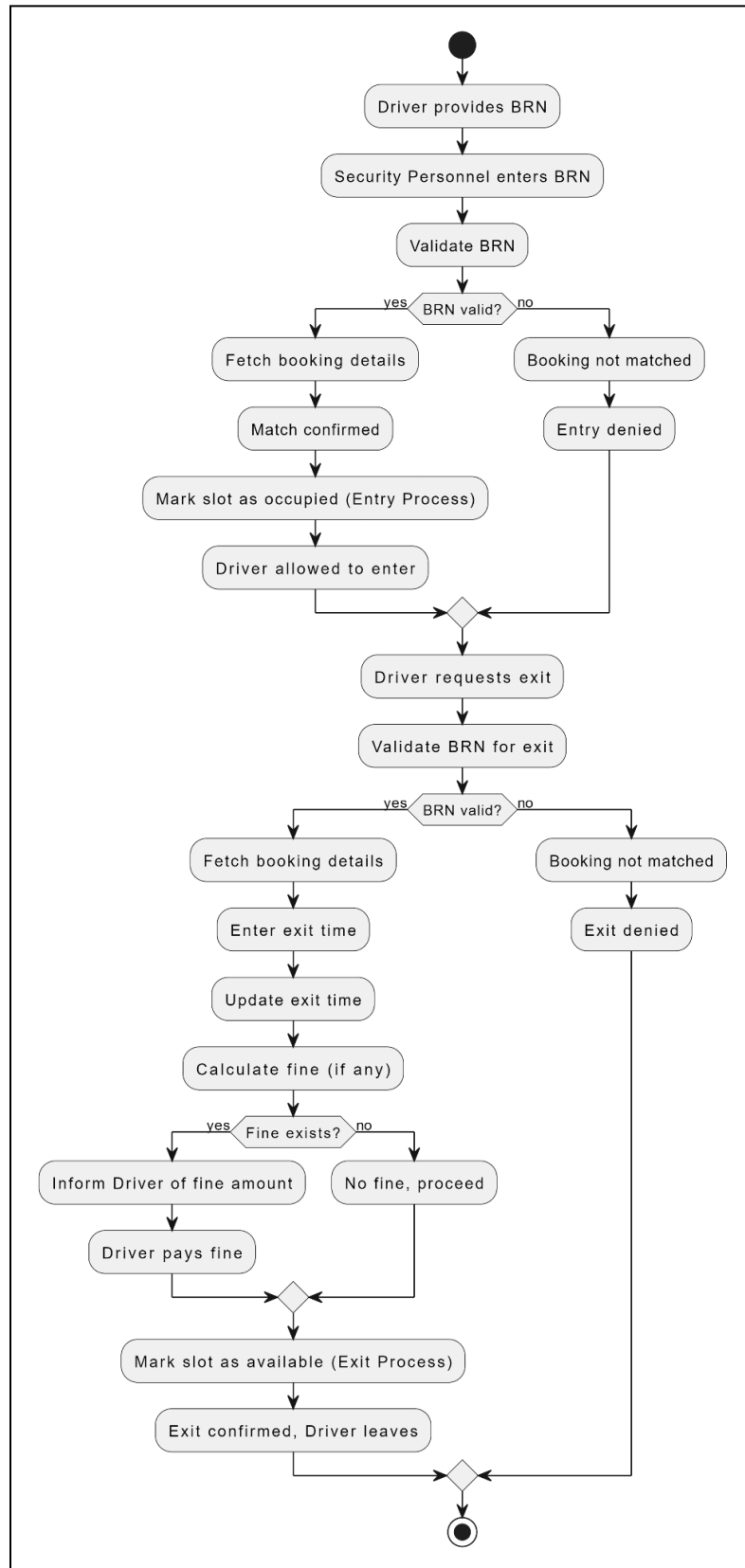
## Sprint 3 - Class Diagram



## Sprint 3 - Sequence Diagram



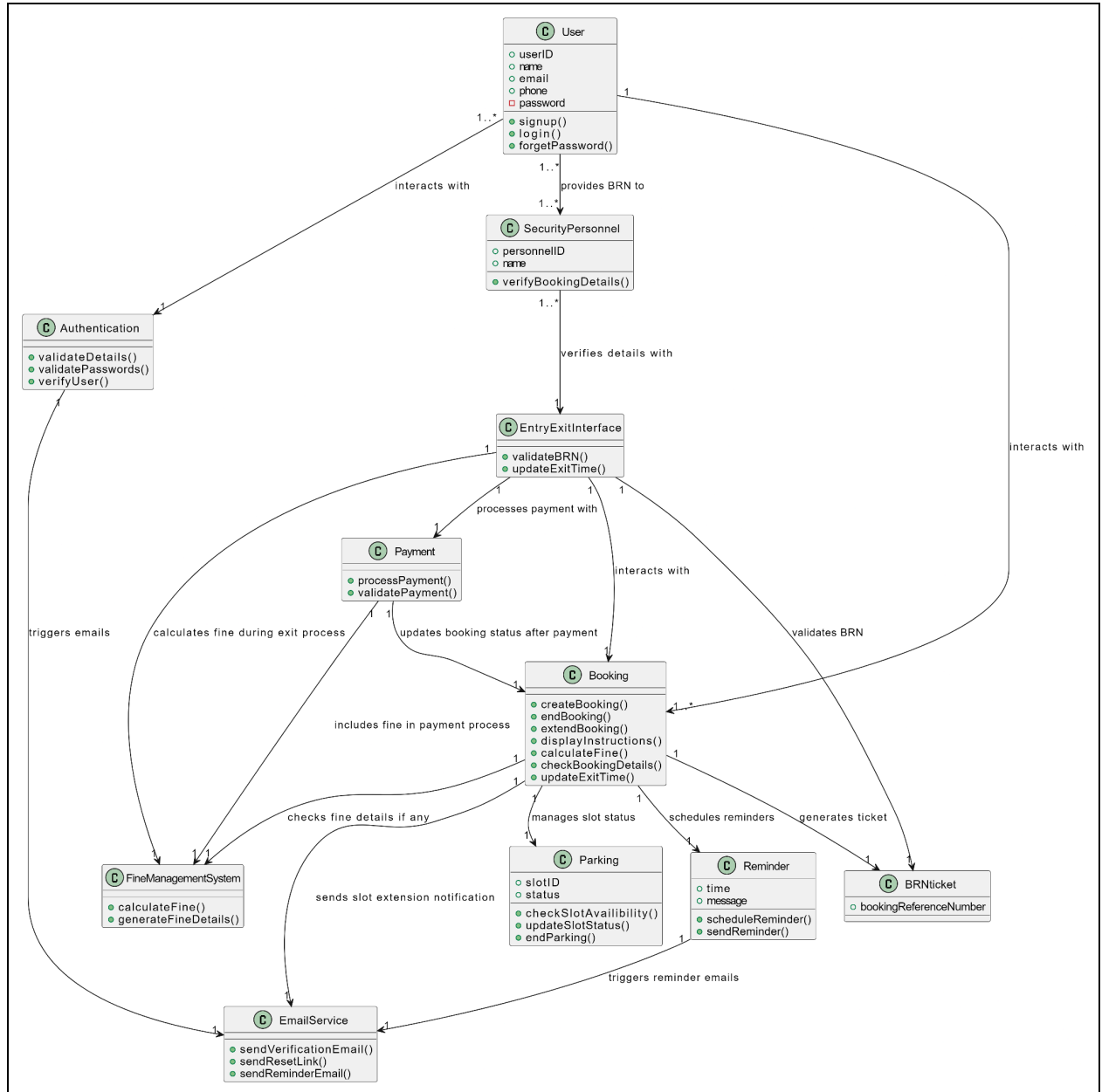
## Sprint 3 - Activity Diagram



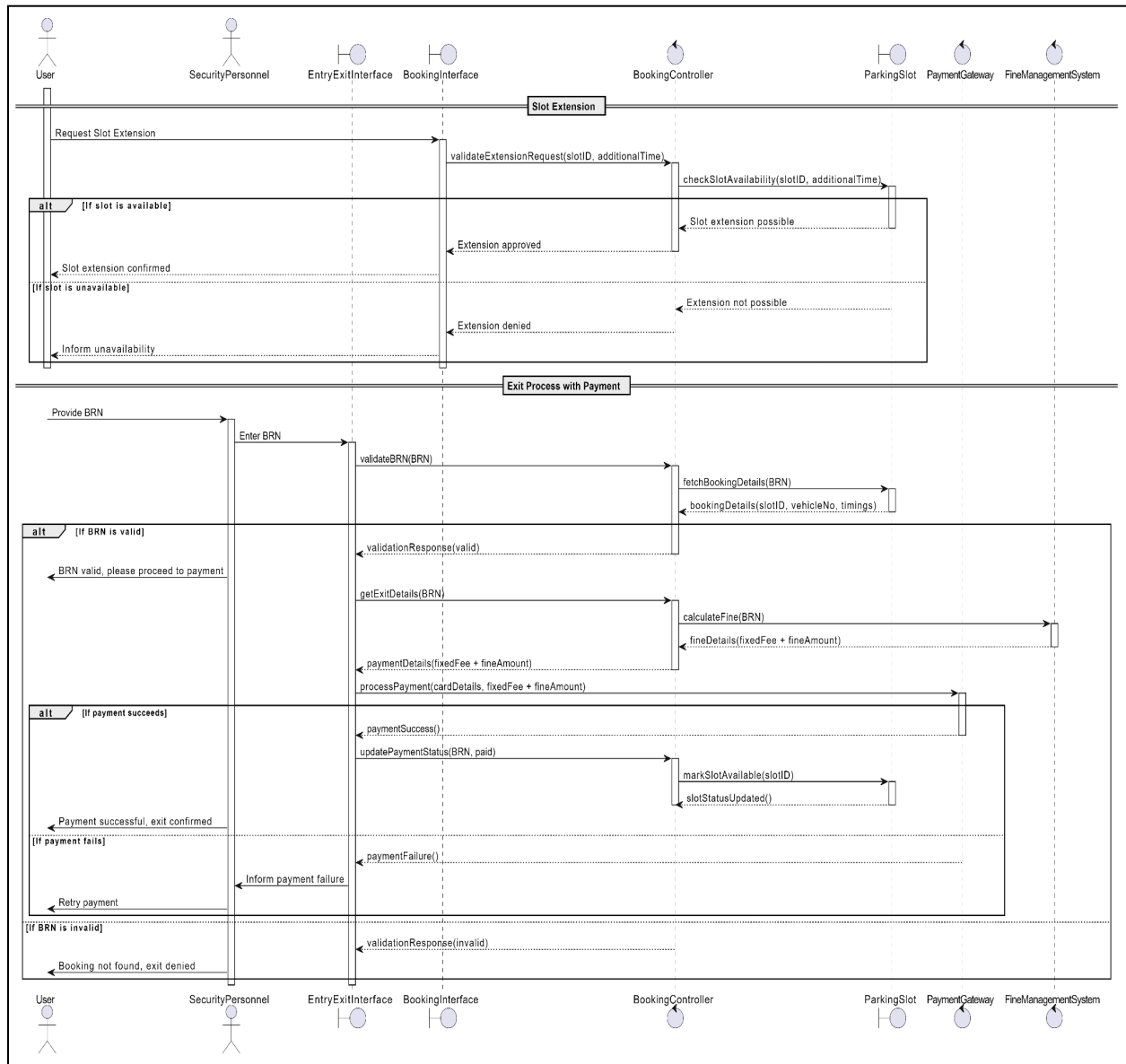
## **Sprint 4: Disabled Accessibility Features, Slot Extension, Payment Integration**

- **Objectives:**
  - Implement accessibility features for disabled users.
  - Allow users to extend parking slot timing if necessary.
  - Integrate payment gateway for booking and exit payments.
- **User Stories Covered:**
  - Story 5: Extend Slot Timing (Parking Lot Users)
  - Story 7: Payment (Parking Lot Users)
  - Story 8: Transaction Failure Handling (Parking Lot Users)
  - Story 9: Accessible Parking for Disabled Users (Parking Lot Users)
- **Deliverables:**
  - Slot extension feature with real-time availability check.
  - Payment system integration with multiple payment options (credit card, digital wallet).
  - Handling of failed transactions and retry mechanisms

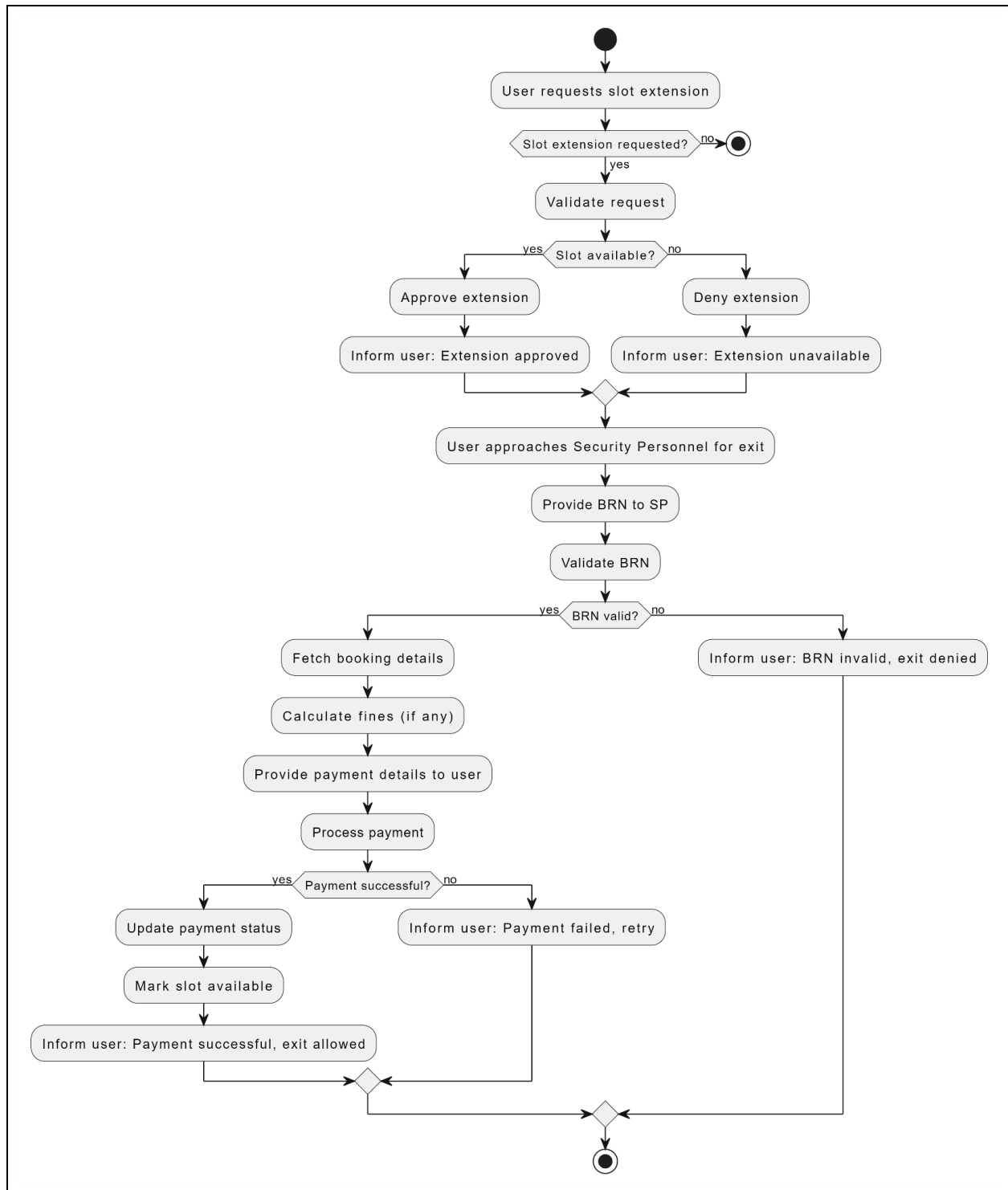
## Sprint 4 - Class Diagram



## Sprint 4 - Sequence Diagram



## Sprint 4 - Activity Diagram

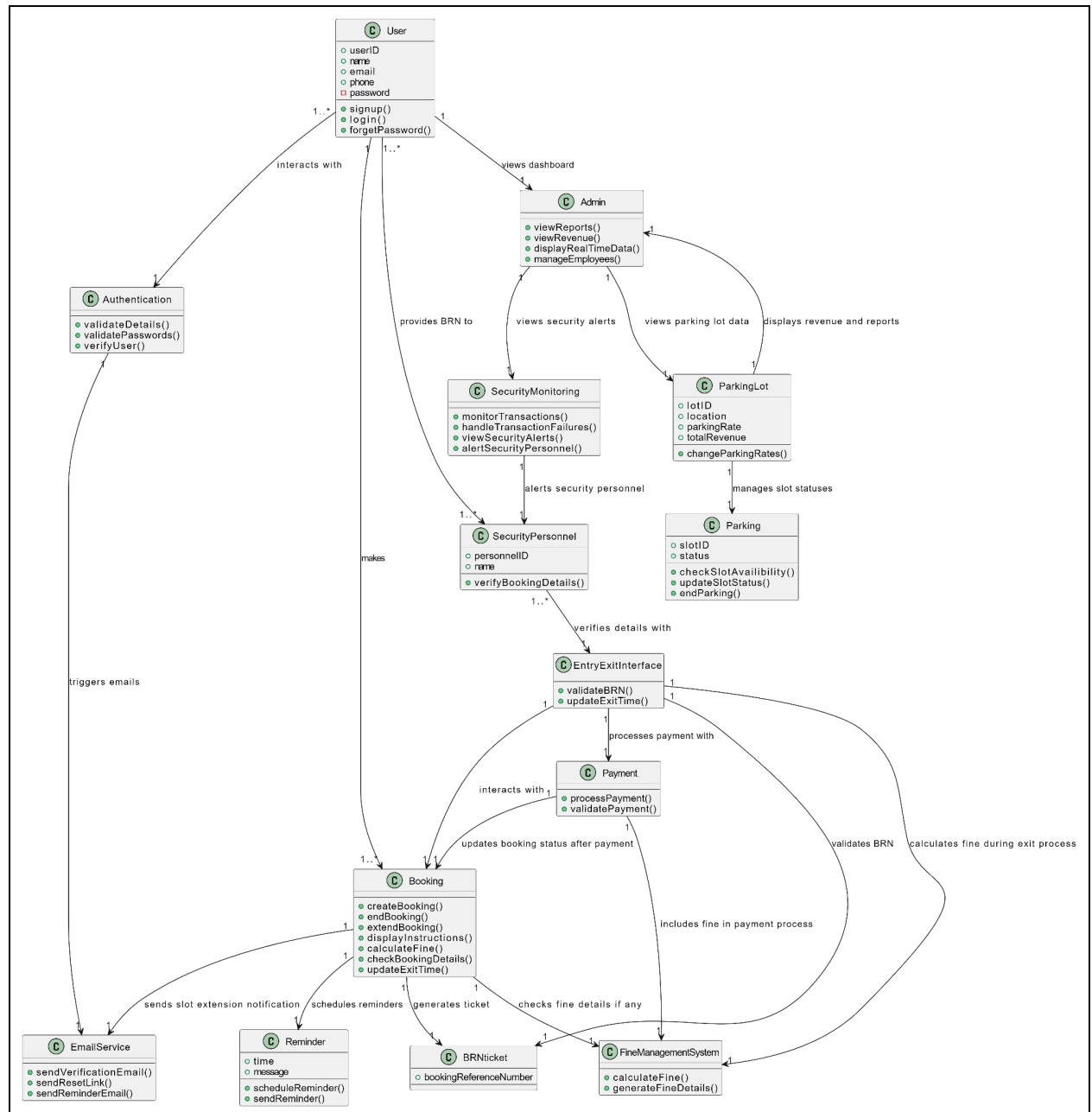


## **Sprint 5: Dashboard for Owners, Security Monitoring**

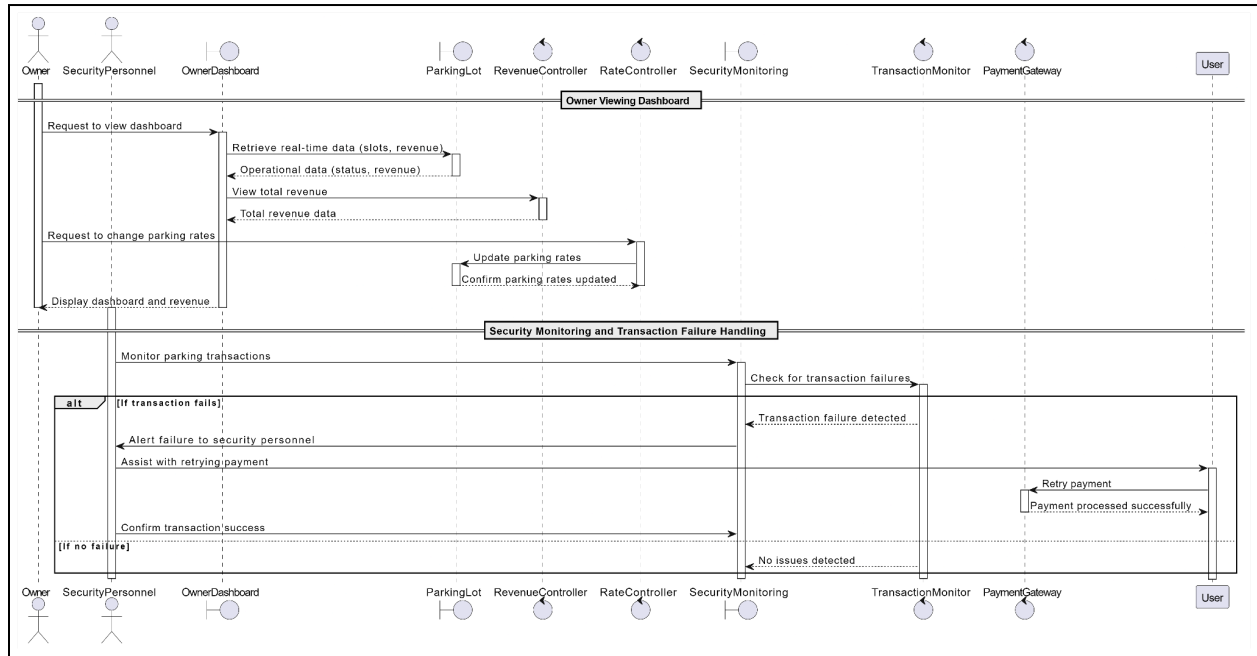
- **Objectives:**
  - Build a dashboard for parking lot owners to monitor operations, view reports, and revenue.
  - Provide security personnel with a monitoring interface for parking operations and user actions.
- **User Stories:**
  - Story 10: Manage Employee Information (Parking Lot Owners)
  - Story 11: View Dashboard (Parking Lot Owners)
  - Story 12: See total revenue (Parking Lot Owners)
  - Story 13: Change Parking Rates (Parking Lot Owners)
  - Story 15: Assist with Transaction Failure Handling (Security Personnel)
- **Deliverables:**
  - Owner's dashboard with real-time monitoring.
  - Employee management interface for owners.
  - Security monitoring tools for personnel with alerts for any issues.



## Sprint 5 - Class Diagram



## Sprint 5 - Sequence Diagram



## Sprint 5 - Activity Diagram

